

**US ENVIRONMENTAL PROTECTION AGENCY (EPA)  
FIFRA SCIENTIFIC ADVISORY PANEL (SAP)  
OPEN MEETING  
CHLORPYRIFOS HEALTH EFFECTS  
APRIL 10 – 12, 2012  
PANEL MEMBER BIOGRAPHIES**

**FIFRA Scientific Advisory Panel Members**

***Kenneth M. Portier, Ph.D. (FIFRA SAP Chair)***

Dr. Kenneth M. Portier is Director for Statistics at the American Cancer Society home office in Atlanta, Georgia, Courtesy Associate Professor of Statistics in the Institute of Food and Agricultural Sciences at the University of Florida, Gainesville, Florida, and Courtesy Professor of Biostatistics at Emory University, Atlanta, Georgia. A native of south Louisiana, Dr. Portier received a BS in mathematics (1973) from Nicholls State University, Thibodaux, Louisiana, and a MS in Statistics (1975) and PhD in Biostatistics (1979) from the University of North Carolina, Chapel Hill. With ACS since early 2006, Dr. Portier provides general statistical support to cancer researchers in the area of design and analysis of cross-sectional and longitudinal sample surveys, program evaluation and cancer modeling. Prior to ACS he spent 27 years as a statistical consultant to researchers in agriculture, natural resources and the environment and as a teacher of applied statistics at the graduate level at UF. Dr. Portier has co-authored over 150 publications in many of the premier journals in agriculture, natural resources and environmental sciences. He has received national recognition for his teaching and twice participated in USDA-funded teaching grants, one on new methods for teaching natural resources sampling and the other to develop a study abroad course in natural resources assessment with the Czech Republic. His collaborations with other researchers at UF have resulted in 36 funded research grants from numerous agencies including NSF, USDA, NOAA, EPA, and DOI. He continues to collaborate with UF's Center for Environmental and Human Toxicology on statistical questions that arise in environmental sampling and risk assessments. He has been a regular member of US EPA (FIFRA-SAP) and National Toxicology Program (NIH-NIEHS) science advisory panels reviewing human and ecological risks. His research interests are wide, including the application of new statistical methodologies to cancer research and environmental problems. His statistical interests are in multivariate methods. He continues his interest in the teaching of statistics.

***Stephen J. Klaine, Ph.D.***

Stephen J. Klaine is a professor in the Department of Biological Sciences and director of the Institute of Environmental Toxicology (CU-ENTOX) at Clemson University. He received his doctorate from the Department of Environmental Science and Engineering, Rice University in 1982 and has spent over 25 years conducting environmental research and educating graduate students. He has 30 Ph.D. and over 40 MS graduates from his laboratory. He has served on the board of directors of the Society of Environmental Toxicology and Chemistry and has been an associate editor for the journal, *Environmental Toxicology and Chemistry* for 15 years. He has been on the editorial board of the journal, *Nanotoxicology*, since 2009. From 1995 to 2000 he was the only US participant on a multi-national International Atomic Energy Agency Cooperative Research Program on Pesticides in Coastal Tropical Ecosystems. In addition to building capacity in tropical countries around the world this group produced the first book to compile pesticide use and effects information in tropical countries. Klaine was a co-editor of this book. Klaine has served on several USEPA Science Advisory Panels and workshops dealing with pesticide and metal fate, effects, and risk assessment. He has also served on the NRC panel to review the National Nanotechnology Initiative Strategy on Environmental and Human Safety Needs for Nanomaterials. He has served on the NIEHS review panel for the Superfund Basic Research Program since 1995 and chaired the panel in 2007 and 2008. He has severed on several other proposal review panels for the USEPA, USDA, and NIEHS. He has been a Sigma Xi National Lecturer, won the Clemson University Sigma Xi researcher of the year in 2007, and won the Clemson University Alumni Award for Outstanding Research in 2009. He has over 110 peer-reviewed publications on research ranging from the bioavailability and toxicity of pesticides and metals to pesticide risk assessment, to the environmental behavior and toxicity of nanomaterials. Current research in his laboratory focuses on characterizing 1) the bioavailability of metals and pesticides in aquatic systems; 2) the comparative phytotoxicity of pesticides; 3) the response of aquatic organisms to episodic contaminant exposures; 4) the water quality consequences of land use; 5) the effects of pharmaceuticals on fish behavior; and 5) the bioavailability and toxicity of colloids and nanoparticles in aquatic systems.

***Carey Pope, Ph.D.***

Dr. Carey Pope is Professor, Head and Sitlington Chair in Toxicology in the Department of Physiological Sciences at the Oklahoma State University Center for Veterinary Health Sciences, Stillwater, Oklahoma. He received a Ph.D. degree from the University of Texas Graduate School of Biomedical Sciences in Houston, Texas in 1985, and completed postdoctoral training in the Neurology Department at Baylor College of Medicine (1985) and the U.S. Environmental Protection Agency's National Health and Environmental Effects Research Laboratory (1986-1989). He previously served on the faculty of the College of Pharmacy, University of Louisiana at Monroe (1989-1999). Dr. Pope's research primarily involves the evaluation of intrinsic and extrinsic factors that modify neurotoxicity from exposure to acetylcholinesterase inhibitors. He has previously served as a consultant for the U.S. Army's external research programs, was a member of the NAS/NRC Subcommittee on Toxicologic Assessment of Low-Level Exposures to Chemical Warfare Agents and is currently a member of the NIEHS Neurotoxicology and Alcohol study section. Dr. Pope has been a member of the Food Quality Protection Act Board since 1996.

***Martha Sandy, Ph.D.***

Dr. Martha S. Sandy is a Senior Toxicologist and Chief of the Cancer Toxicology and Epidemiology Section within the California Environmental Protection Agency's (Cal/EPA) Office of Environmental Health Hazard Assessment (OEHHA). Dr. Sandy's Section conducts hazard identification, dose-response assessment, and exposure assessment of chemical carcinogens. Children's environmental health, and in particular, cancer risk associated with early life carcinogen exposures, has been a significant focus in recent years. Her group is comprised of individuals with expertise in toxicology, epidemiology, biostatistics and exposure assessment. Dr. Sandy has a Ph.D. and an M.P.H. in Environmental Health Sciences, with an emphasis in Toxicology, from the University of California, Berkeley's School of Public Health. She conducted research investigating biochemical and molecular mechanisms of toxicity and carcinogenicity, and biochemical and genetic susceptibility factors in Parkinson's disease before joining OEHHA in 1994. Dr. Sandy currently serves on the U.S. EPA's Children's Health Protection Advisory Committee and has served as an ad hoc member of two U.S. Environmental Protection Agency (U.S. EPA) Scientific Review panels, as a member of two National Academy committees, as a member of one Report on Carcinogens Expert panel, and as a peer reviewer for the National Research Council.

## **FQPA Science Review Board Members**

### ***Michael Aschner, Ph.D.***

Dr. Aschner earned his B.S. from the University of Rochester, Rochester, NY, in 1980, and his Ph.D. in Anatomy and Neurobiology from the University of Rochester School of Medicine and Dentistry, Rochester, NY, in 1985. After a brief postdoctoral fellowship in Toxicology (at the same Institution), he assumed his first faculty position (Assistant followed by Associate Professorship) in the Department of Pharmacology at Albany Medical College, Albany, NY (1988-1994). For the next decade he joined the Department of Physiology and Pharmacology at Wake Forest University School of Medicine, Winston-Salem, NC. As of 2004, Dr. Aschner serves as the Gray E. B. Stahlman Professor of Neuroscience in the Department of Pediatrics at the Vanderbilt University Medical Center in Nashville, TN. He also holds joint appointments at the Kennedy Center for Research on Human Development and in the Department of Pharmacology and is the Director of the Division of Clinical Pharmacology and pediatric Toxicology. Dr. Aschner is also the Director of the Molecular Toxicology Center and the Toxicology Training (as of October 2011). Dr. Aschner has served on numerous national and international toxicology panels (Institute of Medicine, US Environmental Protection Agency, Center for Disease Control), served and chaired the Neurotoxicology and Alcohol (NAL) National Institutes of Health Study Section, and authored approximately 450 peer-reviewed manuscripts and chapters in the area of neurotoxicology. He serves as Associate Editor (Neurotoxicology; Toxicological Science; Neurochemistry Research; Biology Trace Elements Research) and on the Editorial Boards (Toxicology; Acta Neurobiologiae Experimentalis; Alcohol; Frontiers in Genomics) of several journals and he edited several books related to Neurotoxicology. He is a member of the Society of Toxicology, Society for Neuroscience, a Fellow of the Academy of Toxicological Sciences and a past president of the International Neurotoxicology Association. In 2011, he was the recipient of the Society of Toxicology Merit Award. He presently also serves as Vice-President Elect of the International Society of Trace Elements Research in Humans. Dr. Aschner's research interests are in the neurobiology and physiology of astrocytes and the mechanisms of central nervous system injury. Dr. Aschner has been particularly interested in metal uptake and distribution in the brain, devoting the last 25 years of his research to the mechanisms of transport of methylmercury, manganese, and uranium across the capillaries composing the blood-brain barrier, as well as their cellular and molecular mechanisms of neurotoxicity. Studies in the lab address basic mechanisms in various experimental models (*C. elegans*, tissue cultures and rodents) as well as follow-up on the sequelae of manganese deposition in the brains of human neonates.

**Brian Buckley, Ph.D.**

Dr. Buckley is the Executive Director of Laboratories at the Environmental and Occupational Health Sciences Institute at Rutgers University. He received his BS in Chemistry from University of New Hampshire, his PhD in Analytical Chemistry from North Carolina State University and was a post doctoral fellow at Oak Ridge National Lab. He is a member of the graduate faculty in Environmental Sciences, Toxicology and Public Health at Rutgers University and the University of Medicine and Dentistry of New Jersey. He is a member of the American Chemical Society and the Society of Applied Spectroscopy and was honored as the Virgil Payne Award for Outstanding Chemical Service Achievement and has served on multiple review panels for NIH and EPA FIFRA. His research focus is on analytical methods development and modification to measure xenobiotic molecules and their metabolites including pesticides, PCBs plasticizers and other endocrine disrupting compounds prevalent in the environment. In addition he has developed methods for metals measurement and metals speciation by plasma mass spectrometry. His most recent research has been in developing in-vitro models for physiological processes and creating metabolic profiles of specific environmental contaminants such as estrogen mimics. Dr. Buckley has authored/coauthored more than 60 research articles/book chapters including a key paper in evaluating pesticide use in the home and made more than 100 presentations on measurement of contaminants prevalent in environmental health. Dr. Buckley has developed analytical methods for many human biomonitoring studies including; NHEXAS, CLEARs, the Childhood Autism Study and currently the National Children's Study in Queen's county NY. He has appeared on ABC News, Eyewitness news, Fox 5 News NY, News 12 NJ and NJN news discussing topics of environmental contamination and human health.

**Russell Carr, Ph.D.**

Dr. Russell Carr is an Associate Professor in the Center for Environmental Health Sciences in the College of Veterinary Medicine at Mississippi State University. He received his dual B.S. in Biology and Chemistry (1987) from Delta State University, Cleveland, Mississippi, and his M.S. in Zoology (1990) and Ph.D. in Animal Physiology (1994) from Mississippi State University. Prior to serving in his current faculty position, Dr. Carr completed postdoctoral training (1995) and served as a Research Toxicologist (1995-1999) at Mississippi State. Dr. Carr's primary research interests are in the area of developmental neurotoxicology with emphasis on environmental chemicals. One focus is investigating the mechanisms by which developmental organophosphorus insecticide exposure alters the neurochemistry of the brain and induces long-term changes in behavior. Another focus is the development of a short lived aquatic vertebrate model to study the lifetime effects of developmental exposure. Dr. Carr is currently the Research Coordinator/Evaluator for the Indianola Promise Community of the Delta Health Alliance. He is active in both the national and local chapters the Society of Toxicology. Dr. Carr has served as an ad hoc panel member of several U.S. EPA FIFRA Scientific Advisory Panels.

***Abby C. Collier, Ph.D.***

Dr. Abby C. Collier is an Assistant Professor of Pharmacology at the John A. Burns School of Medicine, University of Hawaii. Originally from New Zealand, Dr. Collier received her B.Sc. in Pharmacology from the University of Auckland (1998) and her PhD in Pharmacology from the same institution in 2003. After performing a Post Doctoral Fellowship at the University of Nevada Reno under Dr. Chris Pritsos, Dr. Collier was appointed Assistant Professor of Pharmacology at the University of Hawaii Medical School in 2006. Dr. Collier teaches Pharmacology to undergraduate and graduate students as well as Clinical Pharmacology for medical students and was awarded the University of Hawaii Regent's Medal for Teaching in 2011. Within Pharmacology, her sub-specialty is drug metabolism and pharmacokinetics, primarily focused on research in pregnancy and pediatrics. A winner of the 2011 SimCYP award for Most Informative Paper ("in recognition of scientific research that is leading the world in ADME, IVIVE, pharmacokinetics, modeling and simulation"); Dr. Collier uses a combination of wet laboratory work and *in silico* modeling to provide greater understanding of developmental pharmacology as well as improve drug and chemical safety. Dr. Collier's research laboratory has been funded by the National Institutes of Health and private Foundations since 2007. Along with her collaborators, she also performs research and publishes regularly in the fields of human and environmental toxicology and in endocrinology.

***Ellen Gold, Ph.D.***

Dr. Ellen B. Gold is Chair of the Department of Public Health Sciences and Chief of the Division of Epidemiology in that Department in the University of California Davis School of Medicine and former Chair of the Graduate Group in Epidemiology. After receiving her PhD, she became a faculty member at The Johns Hopkins University until she moved to the UC Davis faculty in 1988. She has been Principal Investigator on a number of NIH-funded, peer-reviewed grants and has had continuous NIH research grant funding for over 20 years. These research grants have largely focused over the past 30 years on lifestyle and environmental factors that affect women's reproductive health and cancer risk and include her work for the past 15 years studying the natural history of the menopausal transition, including hormonal and symptomatic changes, in a longitudinal study of a large, multi-racial/ethnic national cohort. She has also authored or co-authored over 150 peer-reviewed publications. She has mentored numerous graduate students and junior faculty and has received a number of outstanding faculty and mentoring awards, is co-Director of the UC Davis Building Interdisciplinary Research Careers in Women's Health program and is a Fellow in the American Association for the Advancement of Science.

***Gaylia Jean Harry, Ph.D.***

Dr. Jean Harry is currently Head of the Neurotoxicology Group in the Laboratory of Neurobiology at the National Institute of Environmental Health Sciences, National Institutes of Health (NIH) in Research Triangle Park, North Carolina. She has adjunct appointments in the Toxicology Programs of both University of North Carolina/Chapel Hill and Duke University. She has previously served as Acting Laboratory Chief of the Laboratory of Molecular Toxicology at NIEHS and has work as a neurotoxicology discipline leader within the National Toxicology Program. She received her Ph.D. from Virginia Commonwealth University in 1981 and subsequently completed additional training in a NIH Training Program in Neuropathology followed by the award of a NIH individual postdoctoral fellowship in biochemistry/toxicology at the University of North Carolina/Chapel Hill. She joined NIEHS in 1990 as Head of the Developmental Neurotoxicology Group and has been Head of the Neurotoxicology Group since 1995. She has an active research program in the area of neuroimmunotoxicology in the immature and aged nervous system. She has served on numerous national and international committees and working groups with reference to neurotoxicology including the World Health Organization, USEPA, International Life Sciences Institute, as well as state and local environmental agencies.

***Stella Koutros, Ph.D.***

Dr. Stella Koutros is a Research Fellow in the Occupational and Environmental Epidemiology Branch (OEEB) at the Division of Cancer Epidemiology and Genetics (DCEG) of the National Cancer Institute (NCI) at the National Institutes of Health in Bethesda, Maryland. Dr Koutros received her B.S at Tufts University (2002) and an M.P.H (2004) from Yale University. In 2006 Dr. Koutros came to the NCI and Ph.D. (2008) from Yale University. Since 2006 when Dr. Koutros arrived at the NCI to complete her Ph.D. (2008) as part of a cooperative training program between DCEG and Yale University, she has worked extensively on occupational pesticide exposures as risk factors for cancer risk, particularly within the Agricultural Health Study (AHS). Dr. Koutros has focused her research in three primary areas, including, the etiology of cancers of the prostate and bladder, and the effect of pesticide exposure on cancer risk. She has lead several AHS analyses to understand the impacts of pesticides on the overall cancer incidence, the impact of specific chemicals, and the site-specific associations between pesticide exposure and prostate and bladder cancer risk in the cohort. Dr. Koutros has also lead work to explore gene-environment interactions as risk factors for cancer, in particular the interaction between organophosphate insecticides and genetics as risk factors for prostate cancer. Dr. Koutros has provided peer review of manuscripts for many journals and given several invited lectures and additional presentations of her work within the Agricultural Health Study. Dr. Koutros continues her work on agricultural risk factors for cancer as well as risks from other occupational exposures.

***Chensheng (Alex) Lu, Ph.D.***

Dr. Lu is an Associate Professor of Environmental Exposure Biology in the Department of Environmental Health, Harvard School of Public Health. He received the Ph.D. degree in Environmental Health from the University of Washington (Seattle, WA) in 1996. He was an Assistant Professor at the Rollins School of Public Health, Emory University in Atlanta GA from 2004 to 2008, before joining Harvard School of Public Health in 2008. His primary research interest is to assess human exposure to environmental chemicals, such as pesticides and endocrine disruptors, using biomarker approach and to link exposures to health outcomes. His extramural research program consists of funding mainly from National Institute of Environmental Health Sciences (NIEHS) and US EPA's Science to Achieved Results program (STAR). The current ongoing research projects include a community-based intervention study aiming to reduce young children's exposures to pesticides via the implementation of the Integrated Pest Management (IPM) practice in one of the Boston Housing Authority developments, which he serves as the Principal Investigator (PI). He is also a PI of a study to determine how chronic exposures to endocrine disrupting chemicals would affect epigenetic methylation in children, and a co-investigator in a study to examine the interplay between liver enzymes and BPA/phthalates in relations to type-2 diabetes risk. He recently completed a random-sampling population-base study aiming to assess how the variations of dietary consumption patterns affect pesticide exposures. He is the author over 50 peer-reviewed articles. He currently serves as an *ad hoc* member on the Scientific Advisory Panel established by US EPA Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and by US EPA Food Quality Protection Act (FQPA). He is a member of Scientific Experts of European Food Safety Authority (EFSA) since 2009. He also serves as the Associate Editor, Environmental Health Perspectives (EHP) and the Journal of Exposure Science and Environmental Epidemiology (JESEE), two leading scientific peer-review journals in the field of Environmental Health.

***Bette Meek, Ph.D.***

Dr. Bette Meek is currently the Associate Director of Chemical Risk Assessment with the McLaughlin Institute of the University of Ottawa on interchange from Health Canada, where she managed the Existing Substances Division in the Safe Environments Program. Her responsibilities in this capacity related to development and implementation of process and methodology for the assessment of the effects on human health of Existing Substances under the Canadian Environmental Protection Act, including setting priorities for assessment from among all 23, 000 commercial chemicals used in Canada by September, 2006 (i.e., categorization). She has considerable experience in the development of methodology for and evaluation of health-related data on environmental contaminants, having also managed previously programs within Health Canada on contaminants of drinking water and air. She acts as an advisor to several international organizations and has authored over 150 scientific publications in this area. Specific areas of experience include development of frameworks to increase transparency in the assessment of human relevance of animal modes of action, increasing incorporation of biological data in dose-response as a replacement for default, development of predictive exposure and hazard modeling and increasing efficiency in assessment through effective problem formulation and early and continuing peer engagement.



***William Pependorf, Ph.D.***

Dr. William Pependorf is a Professor of Industrial Hygiene at Utah State University. He has been on the Board of the American Industrial Hygiene Association and a Director of the American Board of Industrial Hygiene. Dr. Pependorf has taught and conducted research for over thirty years and published more than 65 papers, book chapters, and one text book beginning with pesticide hazards to farm workers in 1972-1992, inorganic dusts in 1978-1982, organic dusts from grains and livestock in 1982-1995, and automotive industry foundries and metal working fluids in 1987-1994, and broader reviews since 1991 culminating in 2006 with *Industrial Hygiene Control of Airborne Chemical Hazards*. His broad interest has been to develop or/and apply predictive models (many developed in other fields) that describe how physical mechanisms cause (and can be used to control) exposures of workers to organic vapors, hazardous particulate aerosols, and dermally toxic chemicals, with the expectation that such tools will improve the overall practice and knowledge-base of industrial hygiene.

***Barry Ryan, Ph.D.***

Dr. Ryan is Professor of Exposure Science and Environmental Chemistry in the Department of Environmental Health, Rollins School of Public Health, Emory University. He is jointly appointed in the Department of Chemistry at Emory University. Prior to joining the faculty at Emory in 1995, he was on the faculty at Harvard School of Public Health. He received a BS in Chemistry from the University of Massachusetts, an MS in Physical Chemistry from the University of Chicago, and PhD in Computational Chemistry from Wesleyan University. He has been active in the exposure assessment field for over 25 years publishing in excess of 100 peer-reviewed manuscripts and book chapters and making over 190 presentations of his work to the scientific community. His work has included both cross-sectional and longitudinal studies of community-based exposure for multiple pollutants in multiple media. Dr. Ryan is Principal Investigator of a retrospective study of exposure to perfluorooctanoic acid in a large area surrounding a manufacturing facility using this compound. Recently, he began work assessing exposure to pesticides experienced by individuals in a community in Northern Thailand. In addition, he is Co-Principal Investigator and Co-Investigator on three separate Formative Research projects associated with the National Children's Study. Recent work completed by Dr. Ryan's group includes a U.S. EPA-funded STAR Grant designed to assess the effectiveness of biological markers of exposure to organophosphate and pyrethroid pesticides and a study of the impact on the surrounding community of airport emissions of various airborne compounds. Dr. Ryan is a member of the Executive Committee of the Emory/Battelle/ Morehouse consortium for the National Children's Study. He was Principal Investigator on the U.S. EPA funded longitudinal study of exposures to pollutants known as the National Human Exposure Assessment (NHEXAS) - Maryland study, and was Co-Principal Investigator of a study on health-compromised individuals assessing the impact of particulate matter exposure on heart rate variability, and Co-Principal Investigator on a study of the impact of air pollution exposure on hiker lung-health in the Great Smoky Mountain National Park. Dr. Ryan is a member of the Board of Scientific Counselors for U.S. EPA's Office of Research and Development and a member of the US EPA Science Advisory Board Sub-Committee on Exposure and Human

Health. Dr. Ryan also completed a four-year term on the Federal Advisory Committee for the National Children's Study being undertaken by the National Institutes of Health. He has served on numerous advisory panels for the U.S. EPA, most recently as the Chair of the external evaluation committee on the Draft Exposure Factors Handbook update and on the FIFRA SAP on Chlorpyrifos PBPK-Cares Modeling Review. Dr. Ryan has also served on several National Academy of Science panels.

***Alvin V. Terry Jr., Ph.D.***

Dr. Alvin V. Terry Jr. is a tenured Professor of Pharmacology and Toxicology and Director of the Animal Behavior Center at Georgia Health Sciences University (GHSU) in Augusta, Georgia. He also holds joint appointments as Professor of Neurology and Graduate Studies at GHSU, and is a licensed pharmacist in Georgia and South Carolina. A native of South Carolina, Dr. Terry received a B.S. in Pharmacy from the Medical University of South Carolina, Charleston, S.C. in 1982 and a Ph.D. in Pharmacology from the University of South Carolina, Columbia, S.C. in 1991. He received post-doctoral training and served as a junior faculty member at the Medical College of Georgia from 1991-1994, then served as a faculty member of the University of Georgia College of Pharmacy from 1994 until taking his current position at GHSU Department of Pharmacology and Toxicology in December of 2005. To date, Dr. Terry has published 133 peer-reviewed research articles, 8 book chapters, and holds 1 US patent. His research is currently supported by the National Institute of Environmental Health Sciences (NIEHS), the National Institute on Aging (NIA), and the National Institute on Drug Abuse (NIDA). Dr. Terry has served on multiple study sections for a variety of governmental agencies including The National Institutes of Health, NASA and The Department of Veterans Affairs. Dr. Terry's research interests focus on the role of central acetylcholine (i.e., cholinergic) pathways in cognition; specifically how these neuronal pathways are involved in the memory dysfunction associated with neuropsychiatric illnesses and exposures to environmental toxins, especially organophosphates. The actions of both pharmaceutical and toxicological agents on the cholinergic neuronal system, axonal transport, as well as the major growth factors (nerve growth factor, brain derived growth factor) that support the cholinergic system are of particular interest. The laboratory also focuses on drug discovery and development strategies for the treatment of disorders of cognition. The laboratory employs a variety of methods to test hypotheses ranging from behavioral testing in animal models (rodents to non-human primate) to molecular, cellular and analytical techniques.

***John E. Vena, Ph.D.***

Dr. John E. Vena is the Head of the Department of Epidemiology and Biostatistics and University of Georgia Foundation Professor in Public Health at the College of Public Health, University of Georgia. From 2003-2008 he served as Professor and Chair of the Department of Epidemiology and Biostatistics at the Arnold School of Public Health at the University of South Carolina (USC). Dr. Vena was Professor of Social and Preventive Medicine at the State University of New York at Buffalo, School of Medicine and Biomedical Sciences and a research fellow at Roswell Park Cancer Institute (1981-2003) and Director of the Environment & Society Institute (1999-2003). Dr. Vena received his B.S. in Biology from St. Bonaventure University and his M.S. and Ph.D. degrees in Epidemiology from the State University of New York at Buffalo. Dr. Vena is a Fellow of the American College of Epidemiology and the American Epidemiological Society, a member of the International Society for Environmental Epidemiology, Society for Epidemiologic Research and the American Public Health Association (APHA). He has published extensively in the field of environmental and occupational epidemiology with a focus on cancer epidemiology and reproductive and developmental health. Studies have included descriptive and analytic studies of air and water pollution, bladder cancer and drinking water contaminants, occupational exposures, health of municipal workers including firefighters and police officers, diet, electromagnetic fields, persistent environmental toxicants and a Cohort Study of Sportsmen in the Great Lakes region. Since 1981, Dr. Vena has taught courses in epidemiologic methods and applications in occupational health and in environmental health and has mentored graduate students, post-doctoral fellows and junior faculty.

***Charles Vorhees, Ph.D.***

Dr. Vorhees has 35 years of experience conducting neuroscience/neurotoxicology and neuroteratology research. Dr. Vorhees has served on numerous National Institutes of Health site visit committees, special emphasis panels, and ad hoc review committees since 1984, and was a regular member of a study section from 1994-1998, serving as interim chair in 1997. He has served on advisory committees to the US Food and Drug Administration, US Environmental Protection agency, National Research Council, several private foundations, and a number of pharmaceutical companies. Dr. Vorhees was Director of the Graduate Program in Molecular and Developmental Biology, University of Cincinnati College of Medicine, 1998-2004.

***Heather Young, Ph.D., M.P.H.***

Dr. Young is an Associate Professor of Epidemiology and Biostatistics at The George Washington University School of Public Health and Health Services. She has ten years of experience in epidemiologic and biostatistical consulting and has taught numerous courses in graduate epidemiology and biostatistics to public health and health professions students. She completed her MPH and PhD in epidemiology at The George Washington University. She currently teaches courses in Advanced Data Analysis for Public Health, Design of Health Studies, Reproductive and Perinatal Epidemiology, Cancer Epidemiology, and Pesticides and Cancer. Her areas of research interest include cancer particularly reproductive cancers, environmental and occupational exposure assessment, reproductive outcomes related to environmental and occupation exposures, pesticide exposure assessment, and health of military and veteran populations. Dr. Young is currently involved in research examining AIDS-related malignancies in the District of Columbia, cancer patterns in Gulf War veterans, reproductive outcomes in Army Chemical Corps Veterans exposed to dioxin during Vietnam, cancer disparities in the District of Columbia, and breast cancer patient navigation in the District of Columbia. In addition, she has served as a technical advisor for data issues for DC's HIV AIDS Administration and as a statistical consultant on several veterans' health studies for the Institute of Medicine's Medical Follow-Up Agency. She has also published papers examining ovarian cancer risk in the Central Valley of California as related to triazine exposure and has extensive knowledge of California's Pesticide Usage Database. She also serves as a reviewer for numerous epidemiology and environmental health journals as well as sitting on the Veterans Administration Women Veterans Health Program Center of Excellence Review Panel and has served as an ad hoc member on various EPA FIFRA Scientific Advisory Panels.